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JPRS: 4763

10 July 1961

CZECHOSLOVAK VETERINARY MEDICAL RESEARCH AND TRAINING

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19980107 121

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FOREWORD

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JPRS: 4763

CSO: 1886-S

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Following are translation on the above subjects, selected from a Czech source. Source information accompanies each article

<u>Table of Contents</u>	<u>Page</u>
Tasks of Veterinary Research in View of Central Committee of KSC Resolutions of 9-10 February, '61 . . .	1
Problems of Reorganization of Veterinary Faculty Studies	4

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TASK OF VETERINARY RESEARCH IN VIEW OF CENTRAL COMMITTEE
OF KSC RESOLUTIONS OF 9-10 FEBRUARY 1961

[Following is the translation of an article by Dr. Thomas Gdovin in Veterinarstvi (Veterinary Science), Vol XI, No 4, Prague, April 61, pp 124-25.]

The plenary session of UV KSC [Central Committee of the Czechoslovak Communist Party] devoted to agricultural questions was held on 9-10 February 1961. It was found that the results achieved in agricultural production do not correspond to the possibilities and needs of our national economy. It revealed a number of defects regarding the fulfillment of the plan and pointed out the main goals and ways by which the situation could be improved and the fulfillment of the third five-year plan in agricultural production achieved in four years.

The resolution again emphasizes the importance of science in the further progress of agricultural production and states: "Our scientific institutions, especially CSAPV [Czechoslovak Academy of Agricultural Sciences] do not deal adequately and quickly enough with the problems which the building of our socialist agriculture created and offer very inadequate practical help." The resolution further emphasizes that in livestock production the planned number of livestock and a high level of utilization must be achieved as soon as possible in all agricultural plants and districts. The resolution reminds us of the need for preserving the health of the herds against tuberculosis and brucellosis so that by the end of 1965 brucellosis can be eliminated and tuberculosis substantially reduced, and by 1968 tuberculosis could be liquidated. It emphasizes particularly the urgent need "to utilize more quickly and flexibly the most advanced knowledge of science and practice by all workers in agriculture, to assure the most active participation of scientists in solving the practical problems of agricultural production, and to introduce scientific knowledge into practice."

Altogether new and very important tasks were assigned to veterinary research in the part of the resolution of the UV KSC dealing with the basic decision regarding the further direction of the development of cattle raising in the socialist sector, and according to which the construction of large-capacity cattle ranches near the largest political and economic centers will be undertaken. In order to assure the prosperity of these large farms, veterinary research must solve first of all several basic questions with regard to securing the health of the animals and with regard both to the prevention of infectious and parasitic diseases and to non-infectious diseases; among them are chiefly disturbances of metabolism.

From the critical reminders of the discussions and resolution of the UV KSC, it follows that all our science, especially all branches of agricultural sciences and thus also our veterinary science and research, must carry out the directives of the resolutions with concrete work and contribute

to reaching a turning point in agricultural production. Scientific workers in the sector of veterinary medicine, especially in VUV CSAPV [?] in Brno, LEV PCSAPV [?] in Slovakia, and at the veterinary faculties in Brno and Kosice, must intensify their efforts and contribute the results of their scientific-research work to the work of the local veterinary service in improving the breeding of farm animals and in protecting the health of farm animals in general.

It will be necessary to fulfill the plan of research projects in such a way that the results will contribute to the fight against barnyard infections, improvement in their diagnosis, progress in not-understood epizootological problems (especially brucellosis in farm animals), infectious diseases of the young of farm animals, and especially those of cattle with regard to the new concept of cattle raising in our country.

Veterinary research is also given important tasks in the development of diagnosis, prevention and treatment of metabolic disturbances with regard both to the protection against disease of high utility animals, and increasing the vitality of the young of farm animals. The results of this research contribute to lowering direct and indirect losses in animal production and to raise the biological value of production, which is closely connected with the health and living standard of our working people. The fulfillment of tasks that are very demanding scientifically, methodologically, and materially in the sector of veterinary research will place a considerable burden on professional veterinary research under the present conditions. After complimenting the cadres of veterinary research offices within the framework of the CSAPV and the Ministry of Education and Culture, and after utilizing the full capacity of veterinary equipment and service, it will be possible with maximal effort and the concentration of veterinary scientists on key problems of animal production to deal gradually with the most pressing long-range problems. This will require a purposeful orientation exclusively toward the solving of questions on the basis of the results of world veterinary science and the abandoning of all unproductive work by testing the results achieved elsewhere in the world. Our professional researchers in particular must see their main mission in seeking and discovering new laws and ways to prevent diseases of the principal farm animals, thus increasing their usefulness.

There should be more flexibility and speed in applying the research findings to practice; research results should be presented in such a way that they can be used in veterinary practice quickly and safely. This is particularly important, since veterinary measures in large-scale livestock production have a far-reaching effect. A similarly important task is the application of research tasks which have been introduced into practice only slowly or not at all.

In order to improve the quality and rate of research-work progress, it will be correct to deal with important problems in scientific discussions or seminars, where the various steps to be taken and already-achieved results can be discussed by a group of specialists. This will assure verification of research results by other scientists and may even prevent duplication of effort.

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The application of the results of world veterinary science in practice, as well as the solving of research tasks itself, is more possible with flexible documentation. In this sector of veterinary medicine, almost nothing has been done. Therefore, it will be correct that the addition of a veterinary documentary center at the Veterinary Research Institute in Brno be undertaken without delay. The intensified fight against livestock diseases and the new pressing tasks before veterinary science and practice have underlined this demand of long standing.

Veterinary research is approaching the successful solution of numerous problems of particular seriousness and importance. In the interest of their timely fulfillment, it will be necessary to provide for the needs in cadres, space, and materials of veterinary research laboratories, mainly in the framework of the CSAPV and PCSAPV.

The scientific workers in the field of veterinary research are firmly determined to fulfill honorably the tasks outlined by the resolution of the plenary session of UV KSC and contribute effectively to the further progress of socialist agriculture.

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PROBLEMS OF REORGANIZATION OF VETERINARY FACULTY STUDIES

Following is the translation of an article by Miloslav Zendulka in Veterinarstvi (Veterinary Science) Vol 11, No 4, Prague, April 1961, pp 125-128.

At the February session of the UV KSC [Central Committee of the Czechoslovak Communist Party], where the basic questions of increasing agricultural production during the third five-year plan were solved and a resolution was passed regarding the further progress of agricultural production and strengthening of the economy of JZD [?], Academician Klecka dealt with some questions of animal production and, in this connection, with problems of the veterinary service and with veterinary education. Addressing himself to veterinary education he said:

"Veterinary education has not satisfied in its teaching the needs of large-production breeding practice; therefore, the veterinary schools have graduated narrow, specialized veterinary workers who have not mastered the problems of animal production in their full width. A typical example of rigidity in teaching is the fact that until last year diseases of horses and dogs were given 80 hours, while, for instance, diseases of poultry were given only 12 hours.

Socialist agriculture needs a new type of veterinarian. He must be acquainted with the problems of large-scale agricultural production, politically conscious, and able to overcome obstacles which sometimes seem difficult to solve."

The UV KSC dealt in its April session in 1959 with an analysis of our education and the tasks derived from the building of a socialist society, as formulated at the Eleventh Congress of our party, and passed a resolution, "on the close connection of school and life and the further development of schooling and education in Czechoslovakia." In schools of all levels, preparations for a revolutionary reorganization of our school system were made.

The revolutionary reorganization of our society points up the absolute necessity of changing the conditions in our educational system, especially with regard to the fact that our school educates for the future and prepares people to enter their occupations at a time when the building of the socialist society will take another step forward.

The need for revolutionary change is most clearly indicated in the sector of agricultural production, especially the question of animal production, to which our graduates devote much of their time. It is now and will be in the coming years a basic question for the further raising of our standard of living. We cannot fall behind in this heroic fight, but must forge ahead sufficiently to be in step with the planned development of our veterinary service.

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In preparing the revolutionary reorganization of our curriculum, we started from a fact which was obvious from our comparison and evaluation of the previous plan of study of veterinary medicine: that it does not correspond, in spite of reorganizations and reforms already made, to the demands made on the practicing veterinary physician; furthermore, that it does not express the advances which the faculty must maintain.

In the course of the years 1950 to 1956, a number of changes were made, some of them substantial, which did not, however, decisively influence the previous way of study. The new public character of veterinary work was reflected also in teaching. A new discipline of veterinary medicine has been created which has a substantially new content. It did not originate from a mere merging of the previous police and legal veterinary functions, but from a substantial change in the content itself. Organization of veterinary service, veterinary economics, statistics, and education come to the foreground. A new chair of epizootiology is created which is oriented to the problems of the spread of infectious diseases, their diagnosis, and their liquidation in the large-scale breeding practice of socialist agricultural production. An independent field of zoohygiene appears, oriented to the prevention of disease with regard to external conditions of the organism. Establishment of pathological physiology creates the basis for a correct understanding and interpretation of pathological processes.

The addition of these new disciplines was carried out without substantially influencing the basis of the studies.

In reviewing in detail the substance of the previous shortcomings, we came to the conclusion that the main defect lies in the separation of teaching from agricultural production; our graduate has had no opportunity to become closely acquainted with agricultural production. Little attention was paid to teaching students to understand agricultural production and its economics. This means concretely the bringing together and understanding of the problems of agricultural production and its economics, because in many cases the question of prevention, treatment of the herd, and increased utilization is connected with a correct evaluation of the feeding basis, the feeding regimen, etc. In conditions of large-scale production, the complex of preventive measures, immediate diagnosis, and observation of the first deviation from a normal state of health come to the foreground. The orientation of the veterinary service to planned and thorough prevention must be fully apparent in the content of the curriculum of veterinary medicine.

The inadequate connection of teaching with agricultural production influences not only the professional, but also the political preparation of our students. The political-organizing function of the veterinary physician is coming far more to the foreground. In the preparation of the revolutionary reorganization of study, all these considerations were taken into account when it came to characterizing the profile of the veterinary physician and to devising the teaching plan and teaching curricula. This is reflected in the basic article on the mission of the veterinary faculty in the characteristics of the veterinary physician's profile, which states,

"The task of the veterinary faculty is educating politically and professionally highly-trained veterinary physicians devoted to socialism who will, by their consistent, organized, and planned care of the health of farm animals, lower the losses in animal production and in conditions of large-scale agricultural technology create the preconditions for the high production of quality, healthful animal products and their utilization."

In order to guarantee this task, it is necessary that the graduate is educated in the spirit of socialist morality and that he masters securely:

1. a) the political problems of our villages and the correct method of enlightenment for the socialist education of our farmers and for assuring the highest possible production of quality animal products;
- b) the problems of economics, planning, organization, and operation of agricultural establishments under large-scale production conditions;
- c) the economic analysis of losses in animal production, the economics, planning, organization, and administration of the veterinary service and its relation to other concerned parts;
- d) the legal measures in the sector of veterinary activity and in related sectors.

2. The complex protective measures in large-scale breeding of cattle, pigs, and poultry.

3. a) The planning, organization, direction, and control of protective-and counter-measures, especially:
 - aa) against mass illnesses resulting from alimentary exchange;
 - ab) against economically important infectious and parasitic diseases;
 - ac) against sterility in the main kinds of farm animals and against mass diseases of the young animals;
 - ad) against diseases transmitted from animals to people;
 - ae) against other mass diseases of farm animals.
- b) Perform the professional veterinary activities connected with the protection of healthy animals and the treatment of sick animals.

4. The examination and judging of food stuffs and raw materials of animal origin with regard to health protection of people and animals.

To assure this task it is necessary to revalue the quantitative extent and qualitative content of each subject in order to prepare our graduates to fulfill all the new tasks in an equal amount of study time and to overcome the obstacles that are seemingly difficult to deal with.

The subjects which tend to shape our graduates to the profile of the veterinary service in socialist agricultural production were emphasized. Prevention is in the foreground, and in this sense the various disciplines are revalued accordingly. In the curriculum this means concretely more teaching of epizootiology, which has been broadened from the originally suggested 213 hours to 274 hours. In the teaching of internal diseases, attention is given to the subject Internal Disease II (diseases of cattle, small ruminants and pigs), with emphasis on cattle and pigs. An important change has been achieved in the teaching of Internal Diseases I (diseases

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of horses, dogs, poultry, fur-bearing and laboratory animals), where, after lowering the number of instruction hours from 186 to 128, the central point of the instruction, i.e., 50% of teaching time, is on poultry. It must also be considered that a substantial part of the instruction in epizootiology deals with infectious diseases of poultry. A single clinical propaedeutic with orientation to cattle and pigs is formed. The classical object of propaedeutic instruction -- the horse -- is becoming less important, just as the extent of surgery and orthopedics. These facts are also reflected in the preparatory subjects; for instance, in anatomy, in dissecting practice the tendency is towards cattle.

The need of the veterinarian in prevention, dietetics, making of feeding plans, and his measures in animal and even plant production affect economically the whole agricultural production. This is reflected in the curriculum in a new subject, fodder study, with a total instruction time of 153 hours, and with the broadening and new content of nutrition and dietetics, which is designed for large-production technology and feed hygiene and in which instruction time has been raised from 111 to 242 hours. The importance of economics and the organization of socialist agriculture is expressed by an increase from the original 30 hours to 81 hours. Zoo-technique has also been broadened as a subject, especially with regard to health control; the approach is from biological principles, from knowledge of hereditary diseases and progressive genetics. The teaching of these subjects has been further joined to practice by having it directly in the agricultural establishments while the students are there for their practical work. A direct connection of instruction with agricultural production has been achieved.

In the revolutionary reorganization of our studies, the principle was further applied to shift the emphasis in teaching to practical instruction. The shift from lectures to practice was realized also with regard to textbooks and other teaching aids, where more emphasis will be on drill and practical instruction.

The principle of strengthening the theoretical basis of the field was maintained with all these measures. This way there was a rearrangement in the approved reorganization between the basic, the preparatory, and the specialized subjects, with an increase of 16% in basic disciplines, 13% in the preparatory, while the specialized subjects remained approximately on the same level. This does not express an improvement in the quality of instruction or operational practice, which was extended from 14 to 19 weeks.

An important part of the revolutionary reorganization is the introduction of production practice for our students in farm establishments. The necessity of incorporating manual labor into the teaching curricula and plans follows from the demand for fulfilling a political-educational function, the direct acquaintance with the political problems of agricultural production, acquiring the custom of increasing one's qualifications by studying while working. The question of studying while working is basically important, especially in the sector of agricultural production, where continued education must progress (particularly in the middle cadres) much

faster than it has before. Our graduates, as veterinary physicians, will be in direct contact with workers in agricultural production; by understanding the connected problems with study while working, they will be far better able to lead and help the workers in agriculture, adding to their education while working. Production practice has been inserted into our teaching plans after the first and third year. An inseparable part of production practice is also instruction. This means concretely that the students in production practice, besides manual labor, will also receive instruction and will, at the end of production practice, have to take examinations. First-year students in production practice of 15 weeks duration, from the middle of July to the end of October, have each week 6 hours instruction in feed preparation and study, and take examinations in the last week. Third-year students start the 14-week production practice in the 2nd week in April and finish in the middle of July. Working a shortened work week (31 hours), they receive instruction in nutrition and dietetics 2/7, zootechnique 0/3, organization of socialist agriculture 0/3, and have examinations during the last week. The art of sweetening manual labor with instruction and independent study will certainly be a burning problem and, as schools which have already started production practice have experienced, a very troublesome problem. The students who are employed for the duration of production practice by the state farm are still under the influence and care of the faculty. Only if a common understanding of the demands of the establishments and the purpose of production practice is achieved, can we have success.

Another way in which a higher quality of the work of our graduates will result is the reorganization of the termination of study, when all students defend their graduate projects. We see in this not only an increase in the professional effectiveness of the graduates, but mainly an opportunity of applying the political-educational influence of the teachers in a situation where this influence on the student can be observed most clearly. We are at the same time creating a broader basis of workers who through their independent work will share in the tasks of the scientific research chairs and the faculty.

Significant in judging the graduate projects is their orientation. From a review of recent years, a change in orientation can be observed. Comparing the years 1955, 1958, 1959, and 1960, we see that problems of cattle received the biggest part of graduate projects, about 25% in all the listed years. A small rising tendency can also be observed in projects dealing with solving problems connected with pigs -- from 10 to 12%. More impressive is the representation of projects dealing with poultry, where from 2% in 1955 there was a rise to 5% in 1958 and 1959; in 1960 the share was even 10%. But there was a reversed situation with problems dealing with horses; the percentage of projects was 10% in 1955, dropped to 5 to 6% in 1958 and 1959, and to 3% in 1960. The assignment of graduate projects still depends on research needs of faculty, departmental, and routine tasks; these are determined by the demands of practice.

The tasks which we have set for ourselves with the reorganization of

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study must lead necessarily to raising the quality of the political-educational process. Our practice actually forces us to train our graduates not only as good specialists but also as organizers, because the fulfilling of the political-organizational function leads to securing the proposed professional measures. The student obtains training in this activity at the veterinary school, especially during the second half of his studies, when he is guided to more independent work; in the first years he must adapt from his previous way of life and secondary school work to the kind of work done in college. The formative influence is, however, the influence of the whole environment; in this sector the revolutionary reorganization of the studies is not only the task of one faculty but of the entire veterinary service, because it is for this service and for life that our graduates are destined and educated. And often, therefore, the veterinary physician who has contact with our students as their supervisor during operational practice shares in the success or failure.

Using all the proper means at our disposal, we are creating the prerequisites so that the graduates leaving our school will have the training needed for solving the problems of increasing agricultural production.

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-9-

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